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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,797	11/10/2003	Terry James Klos	163.1448USC1	4800
23552	7590	05/05/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			BOYER, CHARLES I	
			ART UNIT	PAPER NUMBER
			1751	
DATE MAILED: 05/05/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,797

Applicant(s)

KLOS ET AL.

Examiner

Charles I Boyer

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05/01/04
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 25, 27, 28, 31, 37, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Lockhart, US 5,439,020.

Lockhart teaches a method for combining dissolved solid and liquid phase detergent constituents with water for use in a car washing process (see abstract). Referring now to FIG. 1, a detergent mixing apparatus 10 in accordance with the present invention is illustrated. In the usual application, the apparatus 10 will be positioned at a site, such as an automated car wash, where a detergent solution of predetermined concentration is required. In its preferred form, the apparatus 10 includes a series of holding tanks 12, 14 and 16 for making and storing a finished liquid detergent from proper proportions of two or more detergent constituents, the detergent solution being most suitable for spray washing purposes. In fluid communication with the holding tanks 12, 14 and 16 is a **dissolution tank 18 which converts finely-divided inorganic solids into a saturated**

liquid for controlled distribution to the holding tanks (meets the limitations part a and part b of claim 25). A series of shipping containers 20, 22, 24 and 26 also in fluid communication with the holding tanks 12, 14 and 16 provides a supply of liquid surfactants and other detergent additives thereto.

The assembly 28 includes a float-actuated control valve 32 for terminating the flow of pressurized water from the inlet 30 to the outlet 34 when the liquid level in the tank 12 reaches a predetermined height. In operation, the valve 32 is selectively activated by the motion of a cooperating float 36. The float 36 rises with the liquid level in the holding tank 12 allowing the control valve 32 to close at a point when the weight of the float 36, transmitted through chain 38, releases spring tension in the valve. Likewise, lowering of the liquid level causes the float 36 to exert a downward tension through the chain 38 and open the control valve 32 to permit water from a municipal source, or any other means for delivering water under a pressure of at least 40 PSI, to enter the tank 12. As will become apparent, then, a supply of liquid detergent can be automatically made anytime the level in the holding tank 12 falls below a determined level (meets the limitations of claims 27 and 28, i.e., a low liquid level "signals" that more is needed and a sufficient liquid level "signals" the shut-off of additional liquid).

The above was taken from col. 3, lines 23-64 of the reference.

When the fluid level in any one of the holding tanks 12, 14, or 16 drops below a set elevation, **as happens through the withdrawal of the finished detergent through pump means (not shown) for distribution in a car wash environment, the inorganic and organic detergent constituents as well as other additives are drawn through associated transfer tubes 78 and 94 into the venturi chamber 42 as water from the float valve 32 is jetted therethrough (meets the limitations of part d of claim 25).**

The finished detergent solutions can be retained in the holding tanks 12, 14 and 16 for withdrawal on an "as needed" basis. Depending upon the application, **such may be further diluted with water for high pressure washing (meets the limitations of part c of claim 25)** or used "as is" for presoaking, washing, engine degreasing, tire cleaning, or other applications.

The above was taken from col. 8, lines 21-52 of the reference.

As this reference meets all material limitations of the claims at hand, the reference is anticipatory.

3. Claims 25, 26, and 29-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Lancz, US 3,816,351.

Lancz teaches powder car wash compositions (see abstract). Lancz adds a powder car wash composition to water thereby forming a stock solution (col. 1, lines 25-29). Note that Lancz teaches that car washes typically prepare stock solutions with water at

Art Unit: 1751

temperatures ranging from 120 to 160 degrees F (col. 1, lines 36-38). An example of such a composition comprises:

Example I

Ingredient	% by Weight
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Tetrasodium pyrophosphate	40
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Soda ash (sodium carbonate)	
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	39
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Lauric acid	4
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C.sub.12 -C.sub.13 fatty alcohol polyethoxylate with 6.5 moles of ethylene oxide/1 mole alcohol*	
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	17
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Total materials	100
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* A C.sub.12 -C.sub.13 linear, primary alcohol ethoxylate marketed under the tradename Neodol 23-6.5 by Shell Chemical Company, Industrial Chemicals Division.

Art Unit: 1751

The components were added into a ribbon mixer in the order shown above and homogenized. The powder car wash is then stored in a container ready for use in the car wash units. The powder formulation of this invention does not cake or freeze in the container. **A stable stock solution containing this powder car wash formulation is made by adding 5-8 parts of product into 90-92 parts of hot water (120-160.degree.F). Further dilution of the stock solution results in about 0.2-0.3 percent of "use solution" that is directly sprayed on the soiled surfaces.**

The above was taken from col. 3, lines 31-55 of the reference.

As this reference meets all material limitations of the claims at hand, the reference is anticipatory.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1751

5. Claims 25-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall, US 4,718,447.

This invention relates generally to a system for dissolving soluble, solid phase material within a container by spraying a solvent on the solid phase material such that a given, predetermined volume of the resulting solution is formed in the container above the remaining undissolved soluble material. Most advantageously, the soluble solid (e.g., powdered detergent) will be in its original shipping container.

4

In the preferred embodiment, the means for introducing the solvent and actuating the flow of solvent includes a support member buoyant in relation to the solution produced by the action of the solvent on the soluble material. The support member is moveably disposed in the container above the body of the soluble material. A control valve is provided in the conduit supplying the solvent to spray means mounted on the buoyant support member. An actuator operatively couples the control valve to a device which is responsive to changes in the level of the solution produced. (col. 1, lines 5-25).

Note that these dissolved detergent compositions may be used by a car wash operator (col. 6, lines 39-47). Though a method for washing a vehicle is not specifically disclosed, as car washes are clearly envisioned by Marshall as an application for their invention, one of ordinary skill in the art would recognize the utility of the prepared detergent compositions of Marshall for washing motor vehicles.

The examiner notes that Marshall does not specifically teach a water heater in their apparatus. The examiner maintains that virtually all washing applications use heated water. Hot water is well known to be beneficial in cleaning applications as it more efficiently dissolves detergents and removes soils. Accordingly, hot water, and so a hot water heater is an obvious part of the invention of Marshall. The examiner's position is strengthened by the teachings of Lancz which teaches that car washes typically prepare stock solutions with water at temperatures ranging from 120 to 160 degrees F (see the rejection of Lancz above).

6. Claims 25-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moffat et al, US 4,020,865.

Moffat et al teach a remote powdered detergent dispenser (see abstract). The present invention is particularly suitable for converting powdered detergent from easy-to-handle 5 to 10 gallon containers into concentrated detergent solution for supplying a remotely located washing apparatus therewith. However, its principles can equally well be applied to use with larger powdered detergent shipping containers without departing from the spirit or intent of this invention. This invention generally includes a chassis defining a **reservoir for holding the concentrated detergent solution produced from the powdered detergent**, which chassis has an upper inlet port therethrough opening into the reservoir. The inlet port is shaped to correspond in size to the open end of the cylindrical detergent holding container (col. 3, lines 50-64).

A single spray nozzle is mounted within the reservoir below the inlet port thereto and directs a spray which covers substantially the entire downwardly facing surface

Art Unit: 1751

of the curved screen member. A pump connecting the reservoir sump with the nozzle, and responsive to energizing signals from the remotely located washing machine, periodically forces concentrated detergent solution from the reservoir through the nozzle, as a low-pressure spray against the screen. **The spray uniformly hydrates that portion of the powdered detergent carried immediately above the screen member, dissolving a portion of the powdered detergent.** The dissolved detergent passes as concentrated detergent solution downwardly through the mesh of the screen member and through the inlet port for collection within the underlying reservoir. **Upon receipt of demand signals from the remotely located washing apparatus, the pump also supplies the remotely located washing apparatus with concentrated detergent solution from the reservoir as required. Sensing control apparatus maintains a predetermined volume of solution within the reservoir by sensing the solution level within the reservoir and by periodically adding fresh water to the reservoir to maintain the solution at a predetermined level.**

Note that these dissolved detergent compositions may be used in car washes (col. 1, lines 13-15). Though a method for washing a vehicle is not specifically disclosed, as car washes are clearly envisioned by Moffat et al as an application for their invention, one of ordinary skill in the art would recognize the utility of the prepared detergent compositions of Moffat et al for washing motor vehicles. The examiner notes that Moffat et al do not specifically teach a water heater in their apparatus. The examiner maintains that virtually all washing applications use heated water. Hot water is well known to be beneficial in cleaning applications as it more efficiently dissolves detergents and removes soils. Accordingly, hot water, and so a hot water

Art Unit: 1751

heater is an obvious part of the invention of Moffat et al. The examiner's position is strengthened by the teachings of Lancz which teaches that car washes typically prepare stock solutions with water at temperatures ranging from 120 to 160 degrees F (see the rejection of Lancz above).

7. Claims 25-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lockhart, US 5,439,020.

Lockhart is relied upon as set forth above. The examiner notes that Lockhart does not specifically teach a water heater in their apparatus. The examiner maintains that virtually all washing applications use heated water. Hot water is well known to be beneficial in cleaning applications as it more efficiently dissolves detergents and removes soils. Accordingly, hot water, and so a hot water heater is an obvious part of the invention of Lockhart. The examiner's position is strengthened by the teachings of Lancz which teaches that car washes typically prepare stock solutions with water at temperatures ranging from 120 to 160 degrees F (see the rejection of Lancz above).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles I Boyer whose telephone number is 571 272 1311. The examiner can normally be reached on M-F 9:30 to 6:00.

Art Unit: 1751

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571 272 1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Charles I Boyer

Primary Examiner

Art Unit 1751